L 05102-67

ACC NR: AP6013238

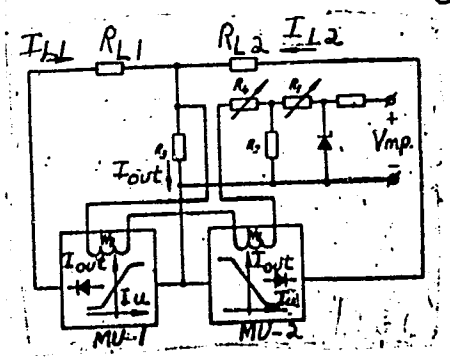


Fig. 1. MU-1 and MU-2 - single track magnetic amplifiers; R_{L1} and R_{L2} - load; R_1, R_2, R_3, and R_4 - resistors; W_c - control windings of the magnetic amplifiers

Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 25Feb65

Card 2/2 vmb

KUZNETSOV, Yu.A.; MAKAROV, A.A.; MELENT'YEV, L.A.; MERENKOV, A.P.; NEKRASOV, A.S.; TSVETKOV, N.I.; KUZNETSOV, Yu.A.; MAKAROVA, A.S.; KARPOV, V.G.; MANSUROV, Yu.V.; SYROV, Yu.P.; KHRILEV, L.S.; TSVETKOVA, L.A.; VOYTSEKHOVSKAYA, G.V.; YEFIMOV, N.T.; LEVENTAL', G.B.; KHANAYEV, V.A.; BELYAYEV, L.S.; GAMM, A.Z.; KARTELEV, B.G.; KRUMM, L.A.; LIOPO, T.N.; SVIRKUNOV, N.N.; DRUZHININ, I.P.; KONOVALENKO, Z.P.; KHAM'YANOVA, N.V.; SHVARTSBERG, A.I.; NIKONOV, A.P.; STARIKOV, L.A.; POPYRIN, L.S.; PSHENICHNOV, N.N.; TROSHINA, G.M.; CHEL'TSOV, M.B.; SVETLOV, K.S.; SUMAROKOV, S.V.; TAKAYSHVILI, M.K.; TOLMACHEVA, N.I.; KHASILEV, V.Ya.; KOSHELEV, A.A.; KUDINOVA, L.I., red.

[Methods for using electronic computers in the optimization of power engineering calculations] Metody primeneniia elektronno-vychislitel'nykh mashin pri optimizatsii energeticheskikh raschetov. Moskva, Nauka, 1964. 318 p. (MIRA 17:11)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Energeticheskiy institut. 2. Chlen-korrespondent AN SSSR (for Melent'yev).

SVIRKUNOV, V.N.; BABENKO, G.N.

Bilateral tubal pregnancy. Zdrav. Bel. 6 no.11:64 N '60.
(MIRA 13:12)

1. Iz Yezerischenskoy rayonnoy bol'nitsy (glavnyy vrach V.N. Svirkunov).
(PREGNANCY, EXTRAUTERINE)

SVIRKUNOV, V.N.

Agricultural injuries in the Yezerishche District. Zdrav.Bel. 8 no.2:48-49 F '62. (MIRA 15:11)

1. Iz Yezerishchenskoy rayonnoy bol'nitsy.
(YEZERISHCHE DISTRICT--AGRICULTURE--ACCIDENTS)

SVIRKYAKIN, V. T.

Cand Med Sci - (diss) "Morphology of the pleura and lungs under a condition of tubercular empiema. (From materials of operations)." Kiev, 1961. 22 pp; (Ministry of Public Health Ukrainian SSR, Kiev Order of Labor Red Banner Med Inst imeni Academician A. A. Bogomolets); 200 copies; price not given; (KL, 7-61 sup, 262)

06198
SOV/115-59-11-26/36

25 (1)

AUTHOR: Svirlov, M.A.

TITLE: The Work Experience of Balance Repair Shops at the RTS of the Chernigovskaya Oblast'

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr. 11, p 62

ABSTRACT: In May 1959, balance repair shops were set up at a number of RTS of the Chernigovskaya oblast' upon a suggestion of the Chernigovskaya gosudarstvennaya kontrol'naya laboratoriya po izmeritel'noy tekhnike (Chernigov State Control Laboratory for Measuring Instruments). The overall conditions of scales in the Chernigovskaya oblast' has improved since that time. During the period of one month (three days per week), lectures were given for the foremen of the balance repair shops by employees of the aforementioned state laboratory for measuring instruments. These instructions dealt with the theory of different types of scales and their repair, automobile balances, and others. Within the Chernigovskaya oblast', there were about 200 automobile ba-

Card 1/2

KNIGA, N. P.; SVIRNOVSKAYA, S. M.

Embichine therapy in neuritis of the acoustic nerve. Vest. otorin. no.2:78-81 '62. (MIRA 15:2)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - prof. N. P. Kniga) Minskogo meditsinskogo instituta.

(EMBICINE) (ACOUSTIC NERVE--DISEASES)
(NEURITIS)

GAPANOVICH, V. YA.; SVIRNOVSKAYA, S.M.

Autofibrin films in otiatry. Zdrav. Bel. 8 no.6:31-35 Je '62.
(MIRA 16:8)

1. Iz kliniki ukha, gorla i nosa (direktor - prof. N.P. Kniga) Minskogo meditsinskogo instituta.
(EAR--DISEASES) (FIBRIN)

L 64120-65

ACCESSION NR: AR5006543 S/0274/64/000/012/A027/A027
621.372.061

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz'. Sv. t., Abs. 12A126

AUTHOR: Svirshcheva, E. A.

TITLE: Analysis of node voltages in the inductively-coupled circuits by a generalized method

CITED SOURCE: Sb. nauchn. rabot aspirantov L'vovsk. politekhn. in-ta, no. 2, 1963, 51-71

TOPIC TAGS: multiple network, multiple network analysis

TRANSLATION: The method is adequate for analyzing the circuits containing not only [illegible] multipole components, such as transformers. To make the method applicable, a conductance matrix of the multipole is required which would connect the pole currents with its pole voltages with respect to an external reference node.

Card 1/2

L 6[illegible]20-65

ACCESSION NR: AR5006543

$$\begin{vmatrix} I_1 \\ I_2 \\ \dots \\ I_k \\ \dots \\ I_n \end{vmatrix} = \begin{vmatrix} V_{11}, V_{12}, \dots, V_{1k}, \dots, V_{1n} \\ V_{21}, V_{22}, \dots, V_{2k}, \dots, V_{2n} \\ \dots \\ V_{k1}, V_{k2}, \dots, V_{kk}, \dots, V_{kn} \\ \dots \\ V_{n1}, V_{n2}, \dots, V_{nk}, \dots, V_{nn} \end{vmatrix} \begin{vmatrix} U_1 \\ U_2 \\ \dots \\ U_k \\ \dots \\ U_n \end{vmatrix}$$

[illegible] a matrix contains all information on the multipole connected in any way in a complex circuit, including the case when none of its poles coincides with the [illegible]. The method permits using computers. Real inductively-coupled [illegible] can be considered as n-pole networks whose parameters can be conveniently presented as a floating matrix that includes $k = \frac{(n-1)^2-(n-1)}{2}$ independent coefficients. For the inductively-coupled elements with $n \geq 4$, it is impossible to develop a floating matrix from the published data. Methods are suggested for experimental determination of the floating matrix. It is noted that more complete characterization of transformers are needed when the method is applied to the transformer-type circuits. Hence, it is desirable that the transformer nameplate carry not three but all six frequency parameters required for the analysis. [illegible] illustrations. Bibliography: 6 titles.

SUB CODE: EC ENCL: 00

Card 2/2

SVIRSHCHEYSKAYA, M.M.; IL'YUSHENKA, L.F.

Magnetic defectoscopy of cutting tools. Vestsi AN BSSR no.1: 98-103 Ja-F 52. (MLRA 7:8)
(Cutting tools) (Metallography)

SVIRSHCHEVSKAYA, M.M., kandydat fizika-matematychnykh navuk.

New method of holding the test object in magnetic defectoscopy.
Vestsi AN BSSR no.1:104-105 Ja-F '52. (MLRA 7:8)
(Metallography)

SVIRSHCHEVSKAYA, M.M.; IL'YUSHENKO, L.F.; TALAKO, G.S.

Magnetic control of hollow steel cylinders on deep hole drilling machines. Sbor.nauch.trud.Fiz.-tekh.inst.AN BSSR no.1:162-166'54. (MLRA 10:1)

(Magnetic testing) (Cylinders)
(Machinery industry--Quality control)

SVIRSHCHEVSKAYA, M.M.

New method for the automatic sorting of certain steel machine parts. Sbor.nauch.trud.Fiz.-tekh.inst.AN BSSR no.1:167-170 '54. (MLRA 10:1)

(Magnetic testing) (Machinery industry--Quality control)

SVIRSHCHEVSKAYA, M.M., kandidat fiziko-matematicheskikh nauk; PANTELEYEV, V.V.

Magnetic control of the quality of cementation and heat treatment of bicycle hubs. Izv. AN BSSR no.1:107-114 Ja-F '55. (MLRA 8:7)
(Bearings (Machinery)) (Cementation (Metallurgy))

SVIRSHCHEVSKAYA, M.M., kandidat fiziko-matematicheskikh nauk

Quantum theory of the Faraday effect for ferromagnetic minerals.
Izv. AN BSSR no.1:177-183 Ja-F'55. (MLRA 8:10)
(Quantum theory) (Ferromagnetism) (Optical rotation)

S/137/62/000/006/117/163
A052/A101

AUTHORS: Galenko, P. P., Svirshchevskaya, M. M.

TITLE: The effect of hardening temperature on magnetic properties of ШХ-6 (ShKh-6) steel

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1962, 51, abstract 6I305 ("Nauchn. inform. Belorussk. tekhnol. in-t. Ser. obshchetekhn." Minsk, 1961, 18 - 26)

TEXT: The effect of the hardening temperature on magnetic properties of ShKh-6 steel in constant and variable magnetization fields was investigated. The quality of hardening of parts made of this steel can be controlled by comparing magnetic induction of samples hardened at optimum temperature with that of controlled samples. To detect parts heated for hardening to a temperature under 830°C (underheating) magnetization fields of 30 - 50 oe should be applied. To detect parts heated for hardening to temperatures over 830°C (overheating) magnetization fields of over 100 oe should be applied. In magnetic devices intended for the detection both of underheating and overheating it is advisable to apply magnetization fields of ~ 125 oe and over.

T. Rumyantseva

[Abstracter's note: Complete translation]

Card 1/1

SVIRSHCHEVSKIY, A. B., Cand of Tech Sci — (diss) "The Special Features of the Characteristics of a Tractor Engine Operated Continuously under a Load During an Agricultural Operation," Moscow, 1959, 15 pp (Moscow Institute for the Mechanization and Electrification of Agriculture) (KL, 4-60, 120)

SVIRSHCHEVSKIY, A.B., inzh.

Effect of torque sequence on the performance of engines under unsteady load. Trakt.i sel'khozmash. no.6:13-15 Je '59. (MIRA 12:9)

1. Moskovskiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva im. V.M.Molotova.
(Tractors--Engines) (Torque)

BOLOTIN, A.A.; SVIRSHCHEVSKIY, A.B., inzh.

Field unit for investigating operations of tractors. Mekh. i elek. sots. sel'khoz. 17 no.1:24-27 '59. (MIRA 12:1)

1.Vologodskiy molochnyy institut (for Bolotin). 2.Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii sel'skogo khozyaystva.
(Tractors--Testing) (Photoelectric measurements)

GEL'FENBEYN, S.P., kand. tekhn. nauk; SVIRSHCHEVSKIY, A.V., kand. tekhn. nauk

Conference on the Automation of Agriculture. Mekh. i elek. sots. sel'khoz. 21 no.5:36,58 '63. (MIRA 17:1)

SVIRSHCHEVSKIY, I. S.

USSR/ Geology

Card 1/1 Pub. 22 - 32/47

Authors : Smirnov, G. A., and Svirshchevskiy, I. S.

Title : The paleographic value of the diagonal stratification of sandstones of the coal-bearing stratum in the Kizel region of the Ural

Periodical : Dok. AN SSSR 100/6, 1151-1153, Feb 21, 1955

Abstract : Geological data are presented concerning the diagonal stratification of the sandstones found in the carboniferous strata of the Kizelovsk region in the Urals. Ten USSR references (1926-1954). Illustration.

Institution : Academy of Sciences USSR, Ural Branch, Mining-Geological Institute

Presented by: Academician N. M. Strakhov, December 14, 1954

NOMIKOSOV, Yu.P.; SVIRSHCHEVSKIY, V.K.

Increasing the productivity of drilling deep test wells. Izv. SO AN SSSR no.2 Ser. tekh. nauk no.1:12-19 '63. (MIRA 16:8)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR, Novosibirsk.
(Oil well drilling)

SVIRSHCHEVSKIY, Yu. I.

SVIRSHCHEVSKIY, Yu. I. -- "Investigation and Determination of the Coefficient of Resistance to Rolling of the Working Drive Wheel of Agricultural Machines over Old, Worked Peat-Bog Soil." Acad Sci Belorussian SSR. Department of Physicomathematical and Technical Sciences. Minsk, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Knizhnaya Letopis', No 1, 1956

AKULININ, V.S.; ADAMCHUK, G.P.; SVIRSHCHEVSKIY, Yu.I.

The DE-PMDS-60 dredger without moorings. Biul. tekh.-ekon. inform. no. 4:61-63 '61. (MIRA 14:5)
(Dredging machinery)

SVIRSHCHEVSKIY, Yu.I.; KHOMYAKOV, A.G.

The NMP-100 and NMP-55 multiple-bucket excavators. Biul.tekh.-ekon.inform. no.2:31-34 '62. (MIRA 15:3)
(Excavating machinery)

OSTRIKOV, M.S.; VITKEVICH, N.D.; SVIRSKAYA, O.D.

Kinetics of the increase of shrinkage stresses in systems undergoing drying. Koll. zhur. 23 no.1:122-124 Ja-F '61. (MIRA 17:2)

1. Rostovskiy gosudarstvennyy universitet.

SVIRSKAYA, O.D.; OSTRIKOV, M.S.

Shrinkage stresses in some synthetic drying fibers. Koll.zhur. 26 no.1:95-99 Ja-F '64. (MIRA 17:4)

1. Rostovskiy universitet, khimicheskiy fakul'tet.

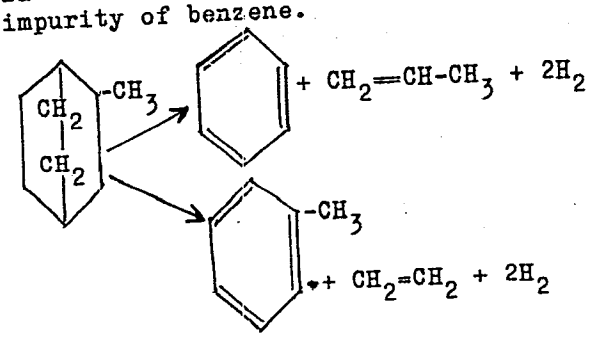
5 (3), 5 (4)

AUTHORS: Kazanskiy, B. A., Gvirskaya, P. I. SOV/79-29-8-27/81

TITLE: Synthesis and Catalytic Transformations of 2-Methylbicyclo-(2,2,2)-octane and 2,3-Dimethylbicyclo-(2,2,2)-octane

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2584 - 2587 (USSR)

ABSTRACT: Previously, B. A. Kazanskiy and A. Plate (Ref 1) showed that the 2-methylbicyclo-(2,2,2)-octane is transformed, in the presence of platinized carbon at 300-310°, to give toluene with a small impurity of benzene.



Card 1/2

Synthesis and Catalytic Transformations of 2-Methyl- SOV/79-29-8-27/81
bicyclo-(2,2,2)-octane and 2,3-Dimethylbicyclo-(2,2,2)-
octane

In order to carry out a more thorough investigation of this reaction, the authors synthesized anew the 2-methylbicyclo-(2,2,2)-octane and the 2,3-dimethylbicyclo-(2,2,2)-octane hitherto not yet described in publications and carried out the catalytic transformations of these hydrocarbons under the conditions mentioned. The two octanes were found to behave differently: The 2-methylbicyclo-(2,2,2)-octane is nearly completely converted into aromatic hydrocarbons among which the toluene is predominant, whereas benzene occurs in traces only; from 2,3-dimethylbicyclo-(2,2,2)-octane only 30% are transformed into a mixture of benzene (about 1/3) and o-xylene (about 2/3) under the same conditions (Scheme 2). Both resultant octanes are gaseous saturated hydrocarbons. There are 2 tables and 3 references.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute of Organic Chemistry of the Academy of Sciences, USSR)

SUBMITTED: July 5, 1958

Card 2/2

ACC NR: AP6029064 SOURCE CODE: UR/0413/66/000/014/0121/0121

INVENTOR: Baskakov, Yu. A.; Svirskaya, P. I.; Shvindlerman, G. S.; Stonov, L. D.; Bakumenko, L. A.; Kol'tsova, S. S.

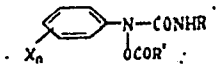
ORG: none

TITLE: A weed control method. Class 45, No. 184062. [announced by All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)]

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 121

TOPIC TAGS: weed KILLER, AMINE, alkylcarbamidoarylhydroxyamine

ABSTRACT: To increase weed control selective action of herbicides, it is proposed to use N-alkylcarbamido-N-arylhydroxylamines of the general formula:



where R and R' are the C_1—C_5 alkyls; X is Cl, CH_3, H; and n is 1 or 2. [WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 26Jun65/

Card 1/1 UDC: 632.954.2

ACC NR: AP6030548 SOURCE CODE: UR/0413/66/000/016/0029/0029

INVENTOR: Baskakov, Yu. A.; Svirskaya, P. I.; Mel'nikov, N. N.; Shvindlerman, G. S.; Vsevolozhskaya, N. B.; Stonov, L. D.; Bakumenko, L. A.

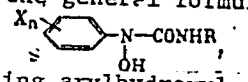
ORG: none

TITLE: Preparation of N-hydroxyurea derivatives. Class 12, No. 184835 [announced by All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 29

TOPIC TAGS: herbicide, hydroxyurea derivative, alkyl isocyanate, alkylcarbamoyl chloride, WEED KILLER, UREA COMPOUND

ABSTRACT: In the proposed method for the preparation of herbicides, derivatives of N-hydroxyurea of the general formula:



are obtained by treating arylhydroxylamines with alkyl isocyanates or with alkylcarbamyl chlorides. [WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 28Jul64/

Card 1/1 UDC: 547.495.2.07
632.954.2

same hydrocarbon with the melting point 63-64°. Thus all endoethylene-hydro-naphthalenes are capable of transformations according to scheme 2 on dehydrogenolysis. The end product is stable up to 320° in the presence of platinized carbon. At 350° (Ref 1) some naphthalene was formed which could, however, not be separated. The formation of naphthalene suggests that the reaction proceeds according to scheme 3, just as in various octanes (Ref 3). It can be seen from the present paper that the endoethylene-tetra- and endoethylene-decahydro-naphthalene is nearly completely transformed into naphthalene at 400°, which can be regarded as a proof of the assumed structure of the hydrocarbon melting at 63-64°. On the other hand, the molecule of the endoethylene-tetrahydro-naphthalene was found to contain an aromatic nucleus, since a number of products were obtained in which the hydrogen is substituted as in aromatic compounds. Thus, for instance, the mononitro-derivative could be formed with the nitro-group in position 5, which further yielded azo-dyes by reduction, diazotization and coupling. The structure of the nitro compound was confirmed by oxidation to phthalic acid (I), without yielding compound (II) possible at the same time. All these experiments show that the above-

mentioned hydrocarbon with the melting point 63-64° represents the 1,4-endoethylene-5,6,7,8-tetrahydro-naphthalene. There are 6 references, 4 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute of Organic Chemistry of the Academy of Sciences, USSR)

SUBMITTED: July 5, 1958

SOV/79-29-9-36/76

5(3)
AUTHORS: Kazanskiy, B. A., Svirskaya, P. I.

TITLE: Synthesis of Bicyclo-(2,2,2)-octane and 2-Methyl-3-ethyl Bicyclo-(2,2,2)-octane

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 2976-2977 (USSR)

ABSTRACT: Bicyclo-(2,2,2)-octane was already synthesized by several authors (Refs 1-3). The 2-methyl-3-ethyl bicyclo-(2,2,2)-octane has, however, hitherto not been described in publications. The authors synthesized these compounds by way of pyrolysis of acetates of the corresponding alcohols and by hydrogenation of the resulting unsaturated hydrocarbons. The pyrolysis of acetates is known to proceed at 400-500° without isomerization of the skeleton of the initial compound and yields hydrocarbons of the desired structure. The authors were interested in finding the behavior of the derivatives of bicyclo-(2,2,2)-octane under these conditions, which are capable of separating one of the intermediate bridges of bicyclooctane. It was thus possible to synthesize bicyclo-(2,2,2)-octane with properties corresponding to those described in publications. This indicates that 2-methyl-3-ethyl bicyclo-(2,2,2)-octane, which was newly obtained by the

Card 1/2

Synthesis of Bicyclo-(2,2,2)-octane and 2-Methyl-3-ethyl Bicyclo-(2,2,2)-octane

authors, has also the structure suggested by them. The synthesis of bicyclo-(2,2,2)-octane proceeds according to scheme 1 and that of 2-methyl-3-ethyl bicyclo-(2,2,2)-octane according to scheme 2. The experimental part provides more details. There are 4 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: July 5, 1958

SVIRSKAYA, Revekka (Vera) Romanovna for Doc Hist Sci on the basis of dissertation defended 15 Jan 59 in Council of Inst of History, Acad Sci USSR, entitled "~~Followers of Petrashevskiy~~ The Petrashevskiyists and the social movement of the ~~Forties of the 19th century~~ 1940's." (BMViSSO USSR, 1-61, 29)

COUNTRY : USSR
CATEGORY : Diseases of Farm Animals. R
Diseases Caused by Helminths.
ABS. JOUR. : RZhBiol., No. 3, 1959, No. 12160

AUTHOR : Avessalomov, I. S.; Svirskaya, S. A.;*
INST. : Leningrad Scientific Research Institute of**
TITLE : An Experiment on Iodine Therapy for Dictyocaulosis of the Calf.

ORIG. PUB. : Byul. nauchno-tekhn. inform. Leningr. n.-i. vet. in-ta, 1957, vyp. 4, 27-28
ABSTRACT : A subcutaneous method of applying a water solution of iodine was tested on 110 sick calves. The method was proven ineffective.

CARD: 1/1

*Shepelev, L. A.
**Veterinary Science.

16

SVIRSKAYA, S. A. and AVESSALOMOV, I. S.

"The Campaign Against Ixodes Ricinus Ticks in Leningrad Oblast' (1956-1959)."

Tenth Conference on Parsitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Leningrad Scientific-Research Veterinary Institute

SVIRSKAYA, S.I.

Determination of concentrations of streptomycin in body fluids. Tr. Akad. med. nauk SSSR Vol 22:79-82 1952.
(CIML 25:5)

YAKOBSON, L.M.; SVIRSKAYA, S.I.; PCHELINA, O.I.

Harmlessness of chlortetracycline as determined by different laboratory tests. Antibiotiki 2 no.1:52-54 Ja-F '57. (MIRA 12:11)

1. Otdel antibiotikov i bakteriofaga Gosudarstvennogo kontrol'nogo instituta syvorotok i vaktsin imeni L.A. Tarasevicha i zavod imeni Karpova.

(CHLORTETRACYCLINE, eff.
on mice in determ. of harmlessness)

SVIRSKAYA, Z.V.

Polyneuritis with dystrophic disorders in pulmonary tuberculosis. Zdrav.Bel. 8 no.12:64-65 D '62. (MIRA 16:1)

1. Kafedra nervnykh bolezney Vitebskogo meditsinskogo instituta (ispolnyayushchiy obyazannosti zaveduyushchego kafedroy - doktor med.nauk I.L.Sosnovik).
(NEURITIS, MULTIPLE)(TUBERCULOSIS)

SOV/112-59-2-3066

32(3)

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 2, P 117 (USSR)

AUTHOR: Svirskiy, D. S.

TITLE: Calculating the Inclined Catenary Suspension of a Contact-Wire System on Electric Railroads (Raschet kosoy tsepnoy podveski kontaktnoy seti elektricheskikh zheleznykh dorog)

PERIODICAL: Sb. stud. nauchn. o-va. Leningr. in-t inzh. zh.-d. transp., 1958, Nr 4, pp 107-126

ABSTRACT: It is noted that a windproof inclined-catenary suspension of a contact wire whose messenger zigzag is the reserve of the contact-wire zigzag has never received wide usage because of the complicated calculations involved and because of lack of erection experience. The most complicated problem in calculating this type of suspension for wind resistance is the allowance for interaction between the messenger and the contact wire through the inclined hangers. It proved possible to solve this problem by means of differential

Card 1/2

Calculating the Inclined Catenary Suspension of a Contact-Wire System on . . . .

equations of the horizontal equilibrium of the wires. Theoretical principles are set forth, and formulae are derived for calculating the inclined-catenary suspension for straight-line track sections and formulae determining the span length. Calculations made on the basis of the above formulae are fairly accurate; they show that the inclined-catenary suspension with a copper messenger permits a span length longer by 10% than semi-inclined suspension, or using a bronze messenger, by 12-15%. Bibliography: 6 items.

B.N.G.

Card 2/2

SVIRSKIY, E.L.

Effectiveness of purification of the air from asbestos cement dust according to materials of laboratory studies. Gig. i san. 28 no.7:96 Jl '63. (MIRA 17:1)

1. Iz Sverdlovskogo nauchno-issledovatel'skogo instituta gigiyeny truda i professional'ny patologii.

SVIRSKIY, G. E., Cand Tech Sci -- (diss) "On the ~~change in of position~~ displacement of vibrating bodies in soils." Mos, 1957. 8 pp (Min Agr USSR, Mos Inst of Mechanization and Electrification of Agriculture im V. M. Molotov), 100 copies (KL, 1-58, 119)

124-58-6-7009

Translation from: Referativnyy zhurnal, Mekhanika, 1958 Nr 6, p 107 (USSR)

AUTHOR: Svirskiy, G. E.

TITLE: On the Displacement of Vibrating Bodies in the Ground (O peremeshchenii vibriruyushchikh tel v gruntakh)

PERIODICAL: Tr. Kishinevsk. s.-kh. in-t, 1957, Vol 15, pp 93-103

ABSTRACT: Bibliographic entry

1. Vibration--Theory

Card 1/1

SVIRSKIY, G. E., Candidate Tech Sci (diss) -- "Investigation of the process of vibration-working of the soil". Moscow, 1958. 15 pp (Min Agric USSR, Moscow Inst of Mechanization and Electrification of Agric), 150 copies (KL, No 22, 1959, 117)

BORISOV, N.D.; NEMOSHKALENKO, V.V.; SVIRSKIY, G.S.

X-ray tube for obtaining fluorescence spectra at a wide range of temperatures. Zav. lab. 24 no.5:639-640 '58. (MIRA 11:6)

1. Institut metallofiziki Akademii nauk Ukrainskoy SSR.
(X-ray spectroscopy)

LASHKO, A.S.; SVIRSKIY, G.S.

Camera for high-temperature radiography of liquids and solids.
Zav. lab. 24 no.5:646 '58. (MIRA 11:6)

1. Institut metallofiziki Akademii nauk USSR.
(Radiography)

BUDKIN, N.N.; SVIRSKIY, I.T.

MBO-4 unloading and piling machine. Sakh.prom. 34 no.5:78 My '60. (MIRA 14:5)

(Sugar beets) (Loading and unloading)

SVIRSKIY, I. V.

Svirskiy, I. V. - "Determing the number of roots lying in the right half of the plane for functions of the form $F(e^z, z)$, where $F(e^z, z)$ is a rational function with amplitudes e^z and z; and the use of these results to examine the automatic regulation of steam turbines", Izvestiya Kazansk. filiala (Akad. nauk SSSR), Seriya fiz.-matem. i tekhn. nauk, Issue 1, 1948, p. 51-61.

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 8, 1949).

SVIRSKIY, I. V.

"Determination of the Reverse Operators from Some Properties of the Direct Operators," Dok. An. 63, No. 2, 1948. Mbr., Physico-Technical Inst., Kazan' Affil., Acad. Sci., -c1948.

SVIRSKIY, I.V.

D Physics
2

Mathematical Reviews
Vol. 14 No. 10
Nov. 1953
Numerical and Graphical Methods.

Svirskiĭ, I. V. On the exactness of variational methods for the determination of the critical forces for longitudinal bending. Izvestiya Kazan. Filial. Akad. Nauk SSSR. Ser. Fiz.-Mat. Tekn. Nauk 2, 63–76 (1950). (Russian)

The author outlines a method for the estimation of the error committed in employing variational methods such as Rayleigh-Ritz' and Galerkin's for approximating eigenvalues of elastic systems. In particular, it is shown that the method may be effectively applied to the problem of longitudinal bending of beams of non-constant cross-section.

J. B. Diaz (College Park, Md.).

6/23/54

PA 240T88

USSR/Mathematics - Variational Methods 21 Dec 52

"Evaluating the Accuracy of Variational Methods of Determining Eigenvalues," I. V. Svirskiy, Phys-Tech Inst, Kazan' Affiliate, Acad Sci USSR

"DAN SSSR" Vol 87, No 6, pp 889-892

The ordinary variational method of Timoshenko-Ritz for detg eigenvalues on application to semi-bounded-from-below self-adjoint operators with point spectrum gives approximate-from-above quantities; that is, quantities somewhat larger than the true value. Here the author proposes a method which permits one to determine approximate

240T88

magnitudes of eigenvalues which are somewhat less than the true. Presented by Acad M. A. Lavrent'yev 25 Oct 52.

240T88

SVIRSKIY, I. V.

SVIRSKIY, I.V.

Svirskiĭ, I. V. On an estimate of the exactness of approximate methods of determining the oscillation frequencies. Izv. Kazan. Filial. Akad. Nauk SSSR. Ser. Fiz.-Mat. Tehn. Nauk 3, 59–86 (1953). (Russian)

In a Hilbert space let H be a self-adjoint operator with a discrete spectrum $\lambda_1 \leqq \lambda_2 \leqq \lambda_3 \leqq \cdots$. The author notes that the variational method of Galerkin yields upper bounds $\lambda_{1r}, \lambda_{2r}, \cdots$, for the λ_r. He devotes the present paper to two methods for finding lower bounds, without referring to other literature on this subject.

In the first method, start with some $H_0 \leqq H$ (meaning $(H_0 u, u) \leqq (Hu, u)$ for all u), where one knows the eigenfunctions φ_i and eigenvalues λ_i^0 of H_0 explicitly. Define $H_1 \leqq H_0$ so that

$$H_1 f = \lambda_m^0 f + \sum_{i=1}^{m-1} (\lambda_i^0 - \lambda_m^0)(f, \varphi_i)\varphi_i.$$

(?)

Let $H_2 = H - H_1$. For any $f_1, \cdots, f_n$ in $D(H_2)$, let $g_i = H_2 f_i$ $(i = 1, \cdots, n)$. The author then finds the operator H_1 which is least among all non-negative, self-adjoint operators A for which $Af_i = g_i$ $(i = 1, \cdots, n)$, a result of apparent independent interest. Let $H_1 = H - H_2$. It is shown that $H_1 \leqq H$.

The second method leads by a long argument to the inequalities $(q = 1, \cdots, m)$

$$(*) \qquad 0 \leqq \lambda_{q+1} - \lambda_q \leqq A_q^2 (\lambda_{m+1} - 2\sum_{i=1}^{m} A_i - \lambda_q + A_q)^{-1},$$

where $A_q^2 = (H\varphi_q, H\varphi_q) - (H\varphi_q, \varphi_q)^2$, and where the φ_q are the normalized eigenfunctions of the Galerkin estimates, with $(H\varphi_q, \varphi_q) = \lambda_q$. Inequalities (*) are stated to be valid only when the denominator is positive; to apply them a rough lower bound for λ_{m+1} is needed.

The methods are illustrated numerically by three problems for the vibrating string or the clamped plate with physical properties varying in space. The absence of any stated theorem leaves the reviewer wondering if he has missed any assumptions.

G. E. Forsythe

MUSHTARI, Kh.M. (Kazan'); SVIRSKIY, I.V. (Kazan')

Determination of major deflections of a cylindrical panel, supported by elastic non ductile rods, as affected by external normal stress. Prikl.mat.i mekh. 17 no.6:755-760 N-D '53. (MLRA 6:12)

1. Fiziko-tekhnicheskiy institut Kazanskogo filiala Akademii nauk SSSR.
(Elastic plates and shells) (Strains and stresses)

SVIRSKIY, I.V.

2

Mathematical Reviews
Vol. 14 No. 11
Dec. 1953
Numerical and Graphical
Methods

7-13-54
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Svirskiĭ, I. V. On the accuracy of Galerkin's method. Doklady Akad. Nauk SSSR (N.S.) 88, 757–760 (1953). (Russian)

The author obtains estimates for the error of Galerkin's method of solving an equation $Hf(x)=h_1(x)$, where H is a symmetric linear differential operator, bounded from below, with a point spectrum. For definiteness the author confines his attention to an equation for the forced vibration of a string: $Hf\equiv -\partial_x^2 f(x)-(\rho\omega^2/T)f(x)=h_1(x)$, subject to $f(0)=f(l)=0$. It is shown that, for $0<a<l$,

$$f(a)=(H^{-1}h_1, h_2)-(h_1, u_1),$$

where $h_2=Hu_1$, where $u_1=u_1(a, x)$ is Green's function for the problem, and where $(f, g)=\int_0^l fg\,dx$. It is next shown that, for all f, $([H_n]^{-1}f, f)\leqq(H^{-1}f, f)\leqq(H_4^{-1}f, f)$, where $[H_n]^{-1}f$ is the Galerkin solution of the problem and H_4 is the operator obtained in an earlier paper [see the preceding review]. Out of the above, if $[H_n]^{-1}$ and H_4 have the same number of negative characteristic values, a two-sided bound is obtained for $(H^{-1}h_1, h_2)$ in terms of the quantities $([H_n]^{-1}h_i, h_j)$ and $(H_4^{-1}h_i, h_j)$ $(i, j=1, 2)$. This yields two-sided bound for $f(a)$.

G. E. Forsythe.

SVIRSKIY, I. V., IVANOV, N. P. and SALEKHOV, G. S.

"The Determination of the Optimum Conditions of Exploitation of Rock-Oil Wells in Strata With Elastic Conditions", Iz. Kazan Fil. AS USSR, 5th edition, 1954.

SVIRSKIY, I.V.

IVANOV, N.F.; SALEKHOV, G.S.; SVIRSKIY, I.V.

Determining optimal operating conditions for oil wells in elastic strata. Izv. Kazan. fil. AN SSSR. Ser. fiz.-mat. i tekh. nauk no.5: 40-51 '54. (MLRA 8:7)

1. Fiziko-tekhnicheskiy institut Kazanskogo filiala AN SSSR.
(Petroleum engineering)

SVIRSKIY, I.V.

Svirskiĭ, I. V. On the construction of variational methods of computation. Prikl. Mat. Meh. 19 (1955), 453–462. (Russian)

Given a system of equations $A\varphi=0$, where A represents a nonlinear operator corresponding to the conditions to be satisfied within and on the boundaries of a region of interest, suppose it required to evaluate a functional $\Phi(\varphi)$, but not necessarily to determine φ itself. An example is the determination of an eigenvalue. The author describes a technique for transforming to a variational problem, the method of Galerkin being a special case, and illustrates with several special problems. It is assumed that the function φ_0 is known for some simpler region approximating the one in question and the method is of interest by virtue of the fact that a function is not sensitive to its argument near an extremum. *A. S. Householder* (Oak Ridge, Tenn.).

$\Sigma = F/\nabla$

MS

SVIRSKIY, I.V. (Kazan')

Modification of Galerkin's method for solving nonlinear problems on the flapping of a distorted plate. Inzh.sbor. 22:42-47 '55. (MLRA 9:5)

(Elastic plates and shells)

SVIRSKIY, I.V.

The problem of intensified exploitation of oil wells. Izv.Kazan.fil. AN SSSR.Ser.fiz.mat.i tekh.nauk no.8:150-153 '55. (MLRA 10:8)

1.Fiziko-tekhnicheskiy institut Kazanskogo filiala Akademii nauk SSSR.

(Petroleum engineering)

SVIRSKIY, I-V.

2007. Svirskii, I. V., Construction of a variational method for calculations (in Russian), *Prikl. Mat. Mekh.* 19, 4, 453-462, July/Aug. 1955.

Variational methods are often used when the character of the solution is known. It appears that a small change in the approximately estimated starting solution does not appreciably change the result. This great advantage follows from the fact that the variational methods exploit the condition of vanishing of the first variation, so that the value of the integral varies slowly in the neighborhood of the solution.

Author describes how to construct, for a given differential equation, such variational problems as are distinguished by the following claim: the deviation from the solution influences as little as possible the deviation of the result.

Author explains the described method in two examples which sufficiently illustrate the application of the procedure both in boundary and in eigen-value problems.

K. Jalis, Czechoslovakia

SVIRSKIY, I-V.

Svirskiĭ, I. V. Modification of Galerkin's method for solution of a nonlinear problem of snapping of a bent plate. [Russian] Prikl. Mat. Mekh. 22 (1958), 412–417.

The author gives a modification of Galerkin's method suitable for systems of the form $P_\mu(u, \lambda) = 0$, where u is a function and P_μ a nonlinear operator, such that

$$A'(w)\delta w = \partial A(w + \mu\delta w)/\partial\mu|_{\mu=0}.$$

Such a system occurs in the theory of buckling of a flat plate, first bent, then subjected to uniform pressure over the convex face. In this case λ would be the critical load, w the deflection of a typical point in the middle surface.

R. C. T. Smith (Cambridge, Mass.).

SOV/124-57-9-10754

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 9, p 131 (USSR)

AUTHOR: Svirskiy, I. V.

TITLE: On the Setting Up of Variational Formulae for Solving Problems of the Theory of Elasticity (O postroyenii variatsionnykh formul dlya resheniya zadach teorii uprugosti)

PERIODICAL: Izv. Kazansk. fil. AN SSSR, ser. fiz.-matem. i tekhn. n., 1956, Nr 10, pp 31-40

ABSTRACT: The author poses the problem of setting up a variational formula for determining the component of the displacement of a given point in a prescribed direction in the case of a geometrically nonlinear deformation, said formula to be capable of determining the desired quantity as the stationary value of some functional. A variational equation possessing this property must have a displacement-vector function ψ, which must continue to satisfy the equilibrium equations and fulfill the boundary conditions when an infinitely small supplementary load is superimposed on an existing state of strain. As in the case of linear problems, this supplementary load (a concentrated force) must be coaxial with the desired displacement. This latter stipulation greatly complicates the

On the Setting Up of Variational Formulae for Solving Problems of the Theory (cont.)

calculations. For this reason, in his example, which involves determining the finite deflection at the center of a circular plate clamped along its rim and subjected to a uniformly distributed load, the author uses the linear theory to find the function ψ. His result agrees with the precise solution arrived at by Chen (Chinese J. Phys., 1947, Vo 7, Nr 2). By contrast, a less precise value for the deflection is obtained by the Bubnov method [Otzyv o rabote prof. S. P. Timoshenko: Ob ustoychivosti uprugikh sistem (Appraisal of Professor S. P. Timoshenko's paper: On the Stability of Elastic Systems). Sb. In-ta inzh. putey soobshch., 1913, Nr 31; Izbrannyye trudy, Sudpromgiz, 1956, pp 136-139].

N. A. Alumyae

Card 2/2

SOV/124-58-5-5713

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 113 (USSR)

AUTHOR: Svirskiy, I. V.

TITLE: On the Construction of Variational Formulas for Stability Problems (K voprosu o postroyenii variatsionnykh formul zadach ustoychivosti)

PERIODICAL: Izv. Kazansk. fil. AN SSSR. Ser. fiz.-matem. i tekhn. n., 1956, Nr 10, pp 41-49

ABSTRACT: An adaptation of the equations of the Bubnov-Galerkin method to the stability problems of an elastic system is described for a case where approximating functions do not fulfill all the geometric boundary conditions. For this purpose it is specified that the first variation of the critical loads with a change in the approximating functions becomes zero. By employing this method the results obtained were as follows: Let the critical condition of the elastic system be described by the equations

$$X(u, p) = 0 \quad (1)$$

$$X_b(u, p) + K(u, p) = 0 \quad (2)$$

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On the Construction of Variational Formulas for Stability Problems

where (1) represents the elastic-system equation, equation (2) represents the boundary conditions where K(u, p) are the elastic-joint reactions and p is a parameter characterizing the magnitude of the load. For the determination of the critical load the following equation is derived :

$$\int_{v_o} \phi_o X(\phi_o, p_{cr})\,dv + \int_B \phi_o [X_B(\phi_o, p_{cr}) + K(\phi_o, p_{cr})]\,ds = 0 \qquad (3)$$

where ϕ_o , although approximating its own solution, does not necessarily fulfill all the boundary conditions. As it works out, expression (3) gives good results if the joints are not too rigid. In the case of joints with considerable rigidity the author recommends using the following variational equation :

$$\int_v \phi_o X(\phi_o, p_{cr})dv + \int_B \phi_o X_B(\phi_o, p_{cr})\ ds - \int_{B'} \psi_2 X_B(\phi_o, p_{cr})\,ds = 0 \qquad (4)$$

where B' is that part of the boundary where the elastic joint conditions apply and ψ_2 is determined by the equation

(next card)

On the Construction of Variational Formulas for Stability Problems

$$K(\psi_2, p_{cr}) = - X_B(\phi_o, p_{cr}) \qquad (5)$$

On the basis of relationship (4) the author gives a method with the aid of which it is possible to determine the effect of the elasticity of the supports on the magnitude of the critical load. The theory developed above is applied to a problem of the stability of a cylindrical shell of moderate length on the assumption that both its ends are joined to circular bulkhead frames. It is assumed that the shell is subjected to the action of external pressure and axial compression. The critical loads are determined twice. First, on the assumption that the bulkhead frames are unstretchable and then, again, taking into consideration that the bulkhead frames are susceptible to stretching. A corresponding transfer coefficient is worked out.

I. I. Vorovich

1. Cylindrical shells--Stability
2. Cylindrical shells--Mathematical analysis

SVIRSKIY, I.V.

Methods for solving problems in the theory of elasticity by which upper and lower limits are obtained for the values sought. Uch. zap. Kaz. un. 117 no.9:17-21 '57. (MIRA 13:1)

1.Kazanskiy filial AN SSSR.

(Elasticity)

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S/044/61/000/006/016/019
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16.400

AUTHOR: Svirskiy, I.V.

TITLE: Several variants of the method of successive approximations and the perturbation calculation

PERIODICAL: Referativnyy zhurnal. Matematika, no.6, 1961, 29, abstract 6V 211 (Izv. Kazansk. fil. AN SSSR. Ser, fiz-matem. i tekhn.n., 1958, vyp.12, 29-41)

TEXT: The author describes three variants of the method of successive approximations for the solution of the equation $Ax+Bx = P$, where A is a linear operator for which the equation $Ax = P$ is solvable sufficiently easy, while B is a non-linear operator the linear part of which may be different from zero. The first ordinary variant of the method of successive approximations consists in the following. The solution of the linear equation $Ax_1 = P$ serves as the first approximation x_1. The second approximation x_2 is determined according to the formula $x_2 = x_1 + \delta_2$, where δ_2 is the solution of $A\delta_2 = P-Ax_1-Bx_1$ etc. The second variant is described by the example of the equation $Ax+Bx = pP$ to the solution of which e.g. there leads the determination of the shifts of the cap of a spherical shell clamped along the boundary and onto which

Card 1/3

there acts a load pP, where p is a numerical parameter. The first approximation is determined from $Ax_1(p_1) = p_1P$, where p_1 is an arbitrarily chosen value of p. The second approximation is calculated according to the formula $x_2(p_1) = x_1(p_1) + \delta_2(p_1)$, where $\delta_2(p_1)$ is a solution of the equation $A\delta_2(p_1) = p_2P - Ax_1(p_1) - Bx_1(p_1)$. Here the number p_2 is determined from the postulate that the transversal bendings of the center of the shell are equal in the first and second approximation. The second approximation is determined analogously. Taking a number of successive p_1-values then the x and p values correspodning to eachother can be determined and the dependence can be graphed. It is pointed out that the second method converges essentially quicker than the first one. The proposed third method of successive approximations differs from the second one by the fact that for its application the magnitude p is corrected for each step so that in two consecutive approximations not the transversal bendings of the center of the shell but the generalized bendings are equal. The effectivity of the described methods is examined by the solution of the boundary value problem

$$d^2y/dx^2 - y = p, \quad y(1) = y(-1) = 0.$$

Several variants of the method...

For one and the same number of approximations it is shown that the third method is most effective. The described methods are applicable not only to the equations of the theory of shells but also to other non-linear equations. Futhermore, the author considers the application of the perturbation method which corresponds to the third method of successive approximations, to the solution of the equation $Ax+\mu Bx = pP$, where μ is a small parameter.

[Abstracter's note: Complete translation.]

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K.7300

AUTHOR: Svirskiy, I.V.

TITLE: On the estimation of exactness of the variation method for the determination of large bendings of shells

PERIODICAL: Referativnyy zhurnal. Matematika, no.7, 1960, 131. Abstract no.7774. Izv.Kazansk.fil.AN SSSR. Ser. fiz.-matem. i tekhn.n., 1958, vyp.12, 43-52

TEXT: The problem on the minimal value of the functional $I_1 = \int \Phi(w)dv$ which is representable as a sum $\int \Phi_1(w)dv + \int \Phi_2(w)dv$ is replaced by the weakened problem on the minimum of the functional $I_2 = \int \{\Phi_1(w_1) + \Phi_2(w_2) + \lambda(w_2 - w_1)\} dv$, where λ is a given function. Here it is assumed that for the admissible functions w the functionals $\int \Phi_1(w_1)dv$ and $\int \Phi_2(w_2)dv$ have an extremum which is a minimum. The necessary conditions for the minimum of the functional I_2 are $L\Phi_1(w_1) - \lambda = 0$, $L\Phi_2(w_2) + \lambda = 0$ and

Card 1/2

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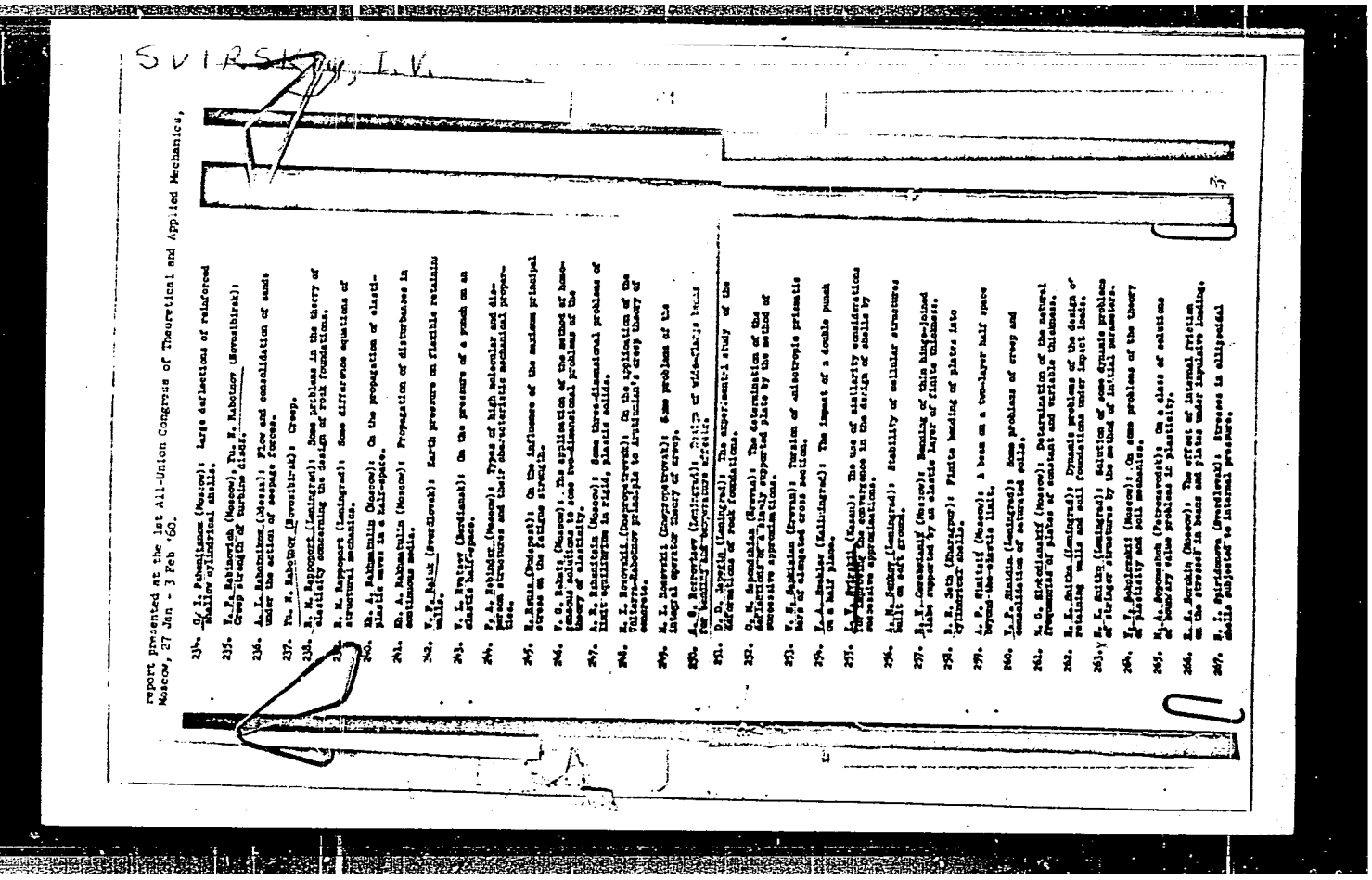
On the estimation of exactness...

$\varepsilon(w_2) = L\phi_1(w_2)+L\phi_2(w_2)$. For calculations w_2 is given; λ is determined from the equation $\lambda = -L\phi_2(w_2)$. The exactness of each solution is characterized by the difference $I_1-I_2 = \int \phi_1 \left\{ [L\phi_1]^{-1}\varepsilon \right\} dv$, where $[L\phi_1]^{-1}\varepsilon$ is a solution of the equation $L\phi_1(w_2-w_1) = \varepsilon(w_2)$. This relation is used for the estimation of the exactness of the determination of bendings of plates and shells with the variation method. The method can be applied if the shell is in a state of tension of a diaphragm in consequence of a tensile stress.

[Abstracter's note: The above text is a full translation of the original Soviet abstract.]

Card 2/2



SVIRSKY, I.V.

report presented at the 1st All-Union Congress of Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb '60.

234. G.Ya. Popkovich (Moscow): Large deflections of reinforced shallow cylindrical shells.

235. Yu.P. Rabinovich (Moscow); Th. M. Rabotnov (Sverdlovsk): Creep strength of turbine disks.

236. A.Ya. Rabotnikov (Udessa): Flow and consolidation of sands under the action of escape forces.

237. Th. M. Rabotnov (Sverdlovsk): Creep.

238. R. M. Rapoport (Leningrad): Some problems in the theory of elasticity concerning the design of rock foundations.

239. R. M. Rapoport (Leningrad): Some difference equations of structural mechanics.

240. Kh. A. Rakhmatulin (Moscow): On the propagation of elastic-plastic waves in a half-space.

241. Kh. A. Rakhmatulin (Moscow): Propagation of disturbances in continuous media.

242. V.F. Reint (Sverdlovsk): Earth pressure on flexible retaining walls.

243. V. L. Freiter (Cherkassk): On the pressure of a punch on an elastic half-space.

244. P. A. Rebinder (Moscow): Types of high molecular and disperse structures and their physico-mechanical properties.

245. E. Reuss (Budapest): On the influence of the maximum principal stress on the fatigue strength.

246. V. G. Rekach (Moscow): The application of the method of homogeneous solutions to some two-dimensional problems of the theory of elasticity.

247. A. R. Rzhanitsin (Moscow): Some three-dimensional problems of limit equilibrium in rigid, plastic solids.

248. S. I. Senyutkin (Leningrad): On the application of the Volterra-Stieltjes principle to Arutiunian's creep theory of concrete.

249. M. A. Sadovskii (Leningrad): Some problems of the integral operator theory of creep.

250. A. G. Sataryan (Leningrad): Design of wide-flange beams for bending and transverse forces.

251. D. D. Sapelin (Leningrad): The experimental study of the deformations of rock foundations.

252. G. M. Sapozhnikov (Kazan): The determination of the deflection of a plastic supported plate by the method of successive approximations.

253. V. M. Sattarov (Kazan): Torsion of anisotropic prismatic bars of elongated cross section.

254. I.A. Sevidov (Kalinin): The impact of a double punch on a half plane.

255. [illegible] (Tbilisi): The use of similarity considerations for improving the convergence in the design of shells by successive approximations.

256. A.M. Sedov (Leningrad): Stability of cellular structures built on soft ground.

257. A.F. Semenovskiy (Kazan): Bending of thin hinge-jointed plates supported by an elastic layer of finite thickness.

258. B.B. Seth (Chandigar): Finite bending of plates into symmetric shells.

259. A.P. Sinitsyn (Moscow): A beam on a two-layer half space beyond the elastic limit.

260. V.P. Skudrin (Leningrad): Some problems of creep and consolidation of saturated soils.

261. N.G. Slobodianyk (Kazan): Determination of the natural frequencies of plates of constant and variable thickness.

262. E.E. Sorochan (Leningrad): Dynamic problems of the design of retaining walls and soil foundations under impact loads.

263. E.E. Sorokin (Leningrad): Solution of some dynamic problems of elastic structures by the method of initial parameters.

264. I.F. Sobolevskii (Moscow): On some problems of the theory of plasticity and soil mechanics.

265. A.A. Spasskaia (Petrozavodsk): On a class of solutions of boundary value problems in plasticity.

266. E.P. Serebin (Moscow): The effect of internal friction on the stresses in beams and plates under impulsive loading.

267. E.I. Shifrinzon (Sverdlovsk): Stresses in elliptical shells subjected to internal pressure.

MUSHTARI, Kh.M., red.; ALUMYAE, N.A., red.; BOLOTIN, V.V., red.; VOL'MIR, A.S., red.; GANIYEV, N.S., red.; GOL'DENVEYZER, A.L., red.; ISANBAYEVA, F.S., red.; KIL'CHEVSKIY, N.A., red.; KORNISHIN, M.S., red.; LUR'YE, A.I., red.; SAVIN, G.N., red.; SACHENKOV, A.V., red.; SVIRSKIY, I.V., red.; SURKIN, R.G., red.; FILIPPOV, A.P., red.; ALEKSAGIN, V.I., red.; SEMENOV, Yu.P., tekhn. red.

[Proceedings of the Conference on the Theory of Plates and Shells] Trudy Konferentsii po teorii plastin i obolochek, Kazan', 1960. Kazan', Akad. nauk SSSR, Kazanskii filial, 1960. 426 p. (MIRA 15:7)

1. Konferentsiya po teorii plastin i obolochek, Kazan', 1960. 2. Moskovskiy energeticheskiy institut (for Bolotin). 3. Kazanskiy khimiko-tekhnologicheskiy institut (for Ganiyev). 4. Institut mekhaniki Akademii nauk USSR (for Kil'chevskiy). 5. Kazanskiy gosudarstvennyy universitet (for Sachenkov). 6. Kazanskiy filial Akademii nauk SSSR (for Svirskiy).
(Elastic plates and shells)

SVIRSKIY, I. V.; GALIMOV, N. K.

Reducing the calculation of two-layer and multi-layer shells to one-layer shells. Izv. Kazan. fil. AN SSSR. Ser. fiz.-mat. i tekh. nauk no. 14:71-74 '60. (MIRA 14:11)
(Elastic plates and shells)

SVIRSKIY, I.V.

Function of the auditory analyzer following an operation for fenestration of the labyrinth depending on the scope of the operation. Zhur. ush., nos. i gorl. bol. 20 no.6:59-61 N-D '60. (MIRA 15:2)

1. Iz kafedry bolezney ukha, gorla i nosa (zav. - zasluzhennyy deyatel' nauki prof. K.L.Khilov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.
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SOV/40-24-1-18/28

AUTHOR: Svirskiy, I. V. (Kazan)

TITLE: Similarity Considerations in the Improvement of Convergence of Successive Approximations in Sheathing Computations

PERIODICAL: Prikladnaya matematika i mekhanika, 1960, Vol 24, Nr 1, pp 134-143 (USSR)

ABSTRACT: This article concerns transversely loaded shallow shells which are freely supported or clamped edgewise, and develops an earlier paper (Izv. Kazansk. fil. AN SSSR, Vol 12, 1948). It is also related to ideas in articles of W. Z. Chien (Chinese J. of Phys,, Vol 7, Nr 2, 1947) and Kh. M. Mushtari (Izv. Kazansk. fil. AN SSSR, ser. fiz-mat. i tekh. nauk, Vol 12, 1958). The author notes that the method applies without change to longitudinally loaded shells. The equations for shallow shells:

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Similarity Considerations in the Improvement of Convergence of Successive Approximations in Sheathing Computations

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$$\Delta^2\Phi = Eh\left\{\frac{1}{2}[w, w] + [w, w^0]\right\} \qquad (1.1)$$

$$D\Delta^2 w + [w^0, \Phi] + [w, \Phi] = pP \qquad \left(D = \frac{Eh^3}{12(1-\nu^2)}\right) \qquad (1.2)$$

are expressed in terms of reduced variables. Here, Φ is stress function; E, Young's modulus; h, shell thickness; υ, Poisson's ratio; w^0, elevation of shell above the base plane before deformation; w, deflection; p and P characterize the load; Δ^2 is biharmonic operator; $[f,g]$ stands for $2f_{xy}g_{xy}-f_{yy}g_{xx}-f_{xx}g_{yy}$. From these reduced equations, the author concludes (similarity theorem) that two shells having the same relative elevation above the base, differing only in their values of E and h, and having the same remaining geometric dimensions, will experience the same reduced deflection v = w/h if the reduced transverse load

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p/Eh^4 and shear displacements of the shell edge are the same. This theorem permits a speeding up of the convergence of successive approximations since the deflection, load, E, and h can suitably be changed at each stage to obtain the best satisfaction of the equations without affecting the relationship between the reduced transverse load and deflection. A detailed description of this modified method of successive approximations is given in which a certain generalized displacement (w, ϕ) is introduced. This is a scalar product in functional space, ϕ being suitably chosen so that the generalized displacements at the n-th and (n+1)st stages are equal, and such that the shell rigidity is smallest. In general, this equality will make the overall displacements at each stage differ by little. The expansions of the n-th approximation w_n and the corresponding right side of the equation for w_n in terms of the eigenfunctions

of the operator Δ^2 are used to justify the load correction at each stage (the thickness correction can be handled analogously). It is also shown how the successive approximations can be somewhat facilitated by the use of the method of small parameters. The author considers two illustrations comparing the variants of the procedure. The first is the cylindrical bending of a plate infinitely long in one dimension and supported so that its edges can only swivel. An approximate relation between the deflection at the middle of the plate and the load is obtained. The values of the load computed from this differ from the exact solution values for a range of w/h from 0.365 to 3.2 by at most 8%. The second example discussed in detail is the uniform loading of a circular plate clamped along its edge. An approximate relation connecting the load and deflection at the center of the plate is again given. There are 7 references, 6 Soviet, 1 Chinese.

SUBMITTED: January 19, 1959
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S/044/62/000/011/049/064
A060/A000

AUTHOR: Svirskiy, I.V.

TITLE: On estimating the accuracy of the approximate solution of non-self-conjugate elliptic differential equations by the Bubnov-Galerkin-Petrov method

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1962, 36, abstract 11V159 (Tr. Konferentsii po teorii plastin i obolochek, 1960, Kazan', 1961, 337 - 346)

TEXT: A is a linear operator in Hilbert space. The approximate solution of the equation $Ax_0 = h$ is sought in the form

$$x_0 = \sum_{k=1}^{n} a_k \varphi_k ,$$

where the coefficients a_k are determined from the conditions $(Ax_0 - h, \psi_k) = 0$, $k = 1, 2, \ldots, n$, where $\varphi_k \in D(A)$, $\psi_k \in D(A^*)$. It is assumed that $A = A_0 + K$, where A_0 is a positive definite operator, and the operator $A_0^{-1} K$ is

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On estimating the accuracy of the approximate ....

fully continuous in the metric $[u, v] = (A_0 u, v)$. The error $y = x - x_0$ belongs to the subspace M, orthogonal to $A^* \psi_k$, $k = 1, 2, \ldots, n$. The following problem is set: to determine the region which can contain the point of an l-dimensional space with the coordinates $\varepsilon_j = \mathrm{Re}\,(y, h_j)$, where $y = x - x_0$ is the error of the approximate solution, and h_j, $(j = 1, 2, \ldots)$ are specified elements of the Hilbert space. The self-conjugate operator $H = \frac{1}{2}(A + A^*)$ is introduced; it is assumed that, using the author's method (RZhMat, 1954, 2628), it was possible to find a self-conjugate operator $H_4 \leq H$, positive definite in the subspace M. It is demonstrated that the numbers ε_j satisfy the inequality

$$\sum_{j,k=1}^{l} a_{jk} \varepsilon_j \varepsilon_k + \sum_{j=1}^{l} b_j \varepsilon_j + d < 0 ,$$

where a_{jk}, b_j are somehow a function of the operator H_4; here $d \leq 0$ and the matrix of the coefficients a_{jk} is positive definite.

S.G. Mikhlin

[Abstracter's note: Complete translation]

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L 47153-66 EWT(d)/T/EWP(1) IJP(c)

ACC NR: AR6000721 SOURCE CODE: UR/0124/65/000/009/V006/V006

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B

AUTHOR: Svirskiy, I. V.

TITLE: Partial linearization procedure in solving shell theory problems using the grid method

SOURCE: Ref. zh. Mekhanika, Abs. 9V41

REF SOURCE: Sb. Issled. po teorii plastin i obolochek. No. 2. Kazan', Kazansk. un-t, 1964, 23-29

TOPIC TAGS: shell theory, linear approximation, polynomial solution, finite difference [redacted]

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ABSTRACT: To solve problems using the grid method, a partial linearization method is proposed. If the Hermite interpolated polynomials, constructed by the boundary values of the one-dimensional problem in statics and by its deflection in the center plane, are considered good approximations to the solution, then the nonlinear finite-difference equation can be linearized by variations on the polynomial solution, and the problem becomes linear. This method is successfully applied by the author to the problem of the deflection of a circular, nonuniformly loaded membrane. A. P. Mikhaylov [Translation of abstract]

SUB CODE: 20, 12

Card 1/1 egh

Svirskiy, I. V.

BOROVSKIY, I. V. PHASE I BOOK EXPLOITATION SOV/6206 75

Konferentsiya po teorii plastin i obolochek. Kazan', 1960.

Trudy Konferentsii po teorii plastin i obolochek, 24-29 oktyabrya 1960. (Transactions of the Conference on the Theory of Plates and Shells Held in Kazan', 24 to 29 October 1960). Kazan', [Izd-vo Kazanskogo gosudarstvennogo universiteta] 1961. 426 p. 1000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Kazanskiy filial. Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina.

Editorial Board: Kh. M. Mushtari, Editor; F. S. Isanbayeva, Secretary; N. A. Alumyae, V. V. Bolotin, A. S. Vol'mir, N. S. Ganiyev, A. L. Gol'denveyzer, N. A. Kil'chevskiy, M. S. Kornishin, A. I. Lur'ye, G. N. Savin, A. V. Sachenkov, I. V. Svirskiy, R. G. Surkin, and A. P. Filippov. Ed.: V. I. Aleksagin; Tech. Ed.: Yu. P. Semenov.

PURPOSE: The collection of articles is intended for scientists and engineers who are interested in the analysis of strength and stability of shells.

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Transactions of the Conference (Cont.) SOV/6206

COVERAGE: The book is a collection of articles delivered at the Conference on Plates and Shells held in Kazan' from 24 to 29 October 1960. The articles deal with the mathematical theory of plates and shells and its application to the solution, in both linear and nonlinear formulations, of problems of bending, static and dynamic stability, and vibration of regular and sandwich plates and shells of various shapes under various loadings in the elastic and plastic regions. Analysis is made of the behavior of plates and shells in fluids, and the effect of creep of the material is considered. A number of papers discuss problems associated with the development of effective mathematical methods for solving problems in the theory of shells. Some of the reports propose algorithms for the solution of problems with the aid of electronic computers. A total of one hundred reports and notes were presented and discussed during the conference. The reports are arranged alphabetically (Russian) by the author's name.

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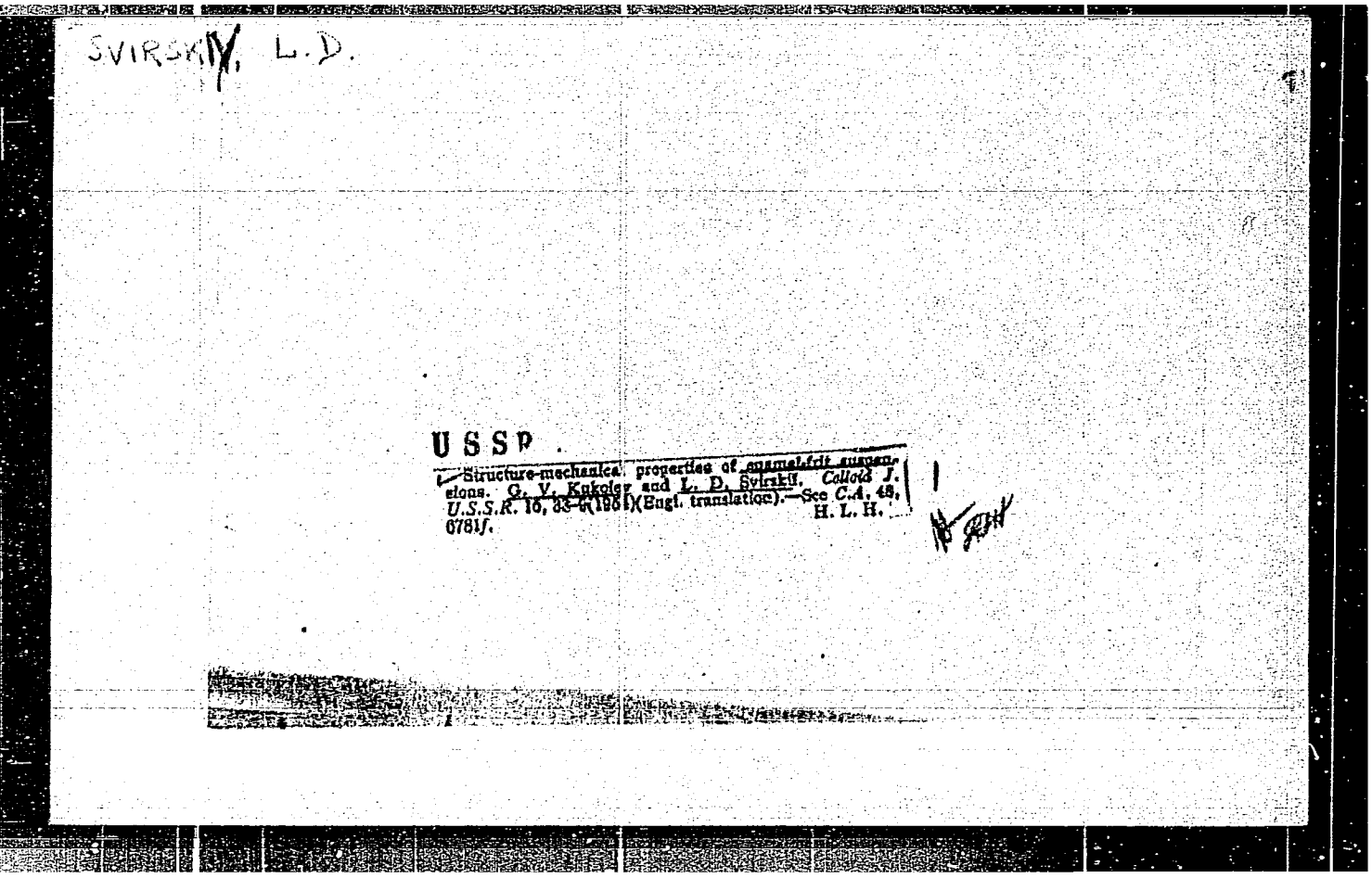
SVIRSKIY, L. D.

(3)

Structure-mechanical properties of enamel frit suspensions. G. V. Kukolev and L. D. Svirskii (V. I. Lenin Polytech. Inst., Kharkov). *Kolloid. Zhur.* 16, 29–35(1954).—Suspensions of 90 parts frits (e.g., SiO_2 57, Al_2O_3 7, K_2O 4, Na_2O 15, B_2O_3 5, CaF_2 5, MnO_2 7%) + 4 parts clay in aq. solns. of $MgSO_4$ were studied in a coaxial-cylinder viscometer. The static yield stress θ, detd. by 2 methods, was independent of the app. dimensions. It increased with the $MgSO_4$ concn. (e.g., 180 and 320 dynes/sq. cm.) in 0.74 and 0.98% $MgSO_4$, resp.). The structural viscosity η increased with the frequency ω of revolutions of the external cylinder, because turbulent flow set in at larger ω. The ω at which it started was greater, the greater was the particle size and the greater was θ; the latter effect was due to gradual destruction of the structure at large ω. The suspensions which proved satisfactory in production had θ between 110 and 180 and η near 1 poise at the onset of turbulency and near 15 poises at the rate of spreading used in production.

J. J. Bikerman



SVIRSKIY, L.D.

USSR

Structure-mechanical properties of enamel-frit suspensions. G. V. Kukolev and L. D. Svirskii. *Colloid J. U.S.S.R.* 16, 33-6(1954)(Engl. translation).—See *C.A.* 48, 6781f. H. L. H.

SVIRSKIY, L.D.

Determining the transitional state of the flow of enamel dorsses. Trudy KhPI 31 no.1:139-144 '59. (MIRA 13:10)
(Enamel and enameling)

SVIRSKIY, L.D.; ZHEBUNEV, V.L.

Spectral method for the quantitative determination of iron in vein quartzes. Trudy KhPI 31 no.1:147-151 '59. (MIRA 13:10)
(Iron) (Quartz) (Spectrochemistry)

SAVCHENKO, Vladimir Ivanovich [deceased]; SVIRSKIY, L.D., dots., otv. red.; KAMINSKIY, L.N., red. izd-va; ANDREYEV, S.P., tekhn. red.

[Enameling technology and equipment for enameling shops] Tekhnologiia emalirovania i oborudovanie emalirovochnykh tsekhov. Pod red. L.D.Svirskogo. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 387 p. (MIRA 14:12)
(Enamel and enameling)

S/596/62/009/000/026/030
I003/1203

AUTHORS: Svirskiy, L. D., and Salganik, L. L.

TITLE: The reaction of protective enamel layers with steel at elevated temperatures

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam. v. 9. 1962. Materialy Nauchnoy sessii po zharoprochnym splavam (1961 g.), 183–187

TEXT: The adhesion of silicate heat-resisting coatings is a result of complex processes taking place chiefly on the metal-coating boundary. These processes are analogous to the electrochemical processes of corrosion of metals, and are due to the existence of micropores on the surface of the steel. The main depolarizer in these microelements is oxygen. The investigations on diffusion of Ca, Ni, Mo, Co, Si, Mg, and Al from the enamel into the steel led to the conclusion that the adhesion of enamel to steel may also be due to diffusion processes. There are 3 figures and 1 table.

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SVIRSKIY, L. D.

PHASE I BOOK EXPLOITATION SOV/6060

Vargin, V. V., Professor, ed.

Emalirovaniye metallicheskikh izdeliy (Enameling of Metal Articles). Moscow, Mashgiz, 1962. 546 p. Errata slip inserted. 7500 copies printed.

Reviewer: A. S. Ragozin, Engineer; Ed.: M. V. Serebryakova, Engineer; Eds. of Publishing House: I. A. Borodulina, A. I. Varkovetskaya, and T. L. Leykina; Tech. Ed.: L. V. Shchetinina; Managing Ed. for Literature on Machinery Manufacture (Leningrad Division, Mashgiz): Ye. P. Naumov, Engineer.

PURPOSE: This book is intended for specialists in enameling, technical personnel of plants, and personnel of scientific research laboratories and institutes. It can also be used by teachers and students of schools of higher education.

COVERAGE: The book provides a brief discussion on raw materials and processes for melting enamels, describes in detail furnaces for melting enamels,

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and offers some recommendations for selection and calculation of furnaces. A special section [Ch. IV, sect. 8] on heat-resistant coatings is included. A flowsheet is given for centralized production of enamels. The properties and preparation of slips are also comprehensively described. The production of new enameled products such as pipelines, architectural and building materials, and aluminum articles is described. Individual chapters were written both by plant personnel and by technical personnel of scientific research institutes and schools of higher eduction. [See: Table of Contents.] No personalities are mentioned. There are 638 references, mainly Soviet, with many English and some German.

TABLE OF CONTENTS [Abridged]:

SVIRSKIY, L.D.; SALGANIK, L.L.; Prinimala uchastiye ZHURZHENKO, V.P.

Interaction of protective enamel coatings with steel at high temperatures. Issl. po zharopr. splav. 9:183-187 '62. (MIRA 16:6)
(Enamel and enameling) (Steel--Electric properties)